

CLAIMS

1. A machine tool accessory including a shank for releasably attaching the accessory to a spindle of a machine tool, the shank being attachable to the spindle in a plurality of orientations and having electrical contacts for electrical communication with complementary electrical contacts at the spindle, the accessory further including a circuit for determining the orientation of the contacts of the shank relative to complementary contacts at the spindle.
10
2. A machine tool accessory as claimed in claim 1 wherein the spindle is rotatable about an axis and wherein the shank of the accessory is attachable to the spindle in any orientation about the axis.
15
3. A machine tool accessory as claimed in claim 2 wherein the number of contacts at the shank is greater than the number of complementary contacts at the spindle.
20
4. A machine tool accessory as claimed in any one preceding claim wherein the circuit comprises a plurality of multi-way switches, switchable to route a contact appropriately.
25
5. A machine tool accessory as claimed in claim 4 wherein the circuit includes a voltage or current detection device for detecting the presence of voltage across the contacts or for detecting current flowing through the contacts and for causing the appropriate switching of the switches.
30

6. A machine tool accessory as claimed in claim 4 or
5 wherein the circuit is operable to detect impedance
across the complementary contacts.

5 7. A machine tool accessory as claimed in any one
preceding claim wherein the contacts provide a route
for power and signal to/from the accessory.

10 8. A machine tool accessory as claimed in any one
preceding claim wherein the circuit is powered by a
power supply from the contacts.

15 9. A machine tool accessory as claimed in any one
preceding claim wherein the contacts comprise at least
three contacts.

10. A machine tool accessory as claimed in any one
preceding claim wherein the shank comprises a male
taper and the contacts are disposed on or adjacent the
20 taper.

11. A machine tool comprising a stationary part;
a rotatable spindle;
and a machine tool accessory having a shank;
25 the spindle having a shank receiving area for
releasably accepting in a plurality of orientations the
shank of the machine tool accessory;
the machine tool further comprising a first
electrical link between the stationary part and the
30 spindle and a second electrical link between the
spindle and the shank in the form of a plurality of
electrical contacts at the shank and a plurality of
complementary electrical contacts at the shank
receiving area of the spindle, the contacts being

arranged such that each is connectable to any one of the complementary contacts.

12. A machine tool as claimed in claim 10 wherein the
5 accessory is as claimed in any one claims 1 to 9.

13. A machine tool as claimed in claim 12 wherein a liquid seal is provided between the shank and the spindle.